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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/718,835

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Jay King

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EXAMINER

KURR, JASON RICHARD

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

12/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/718,835	KING, JAY	
	Examiner	Art Unit	
	Jason R. Kurr	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurosawa et al (US 4,433,209).

With respect to claim 1, Kurosawa discloses an audio playback device interface (fig.4) for interface with an audio headset (col.1 ln.5-22), said interface comprising a load (fig.4 "R2") in series between an audio output of a stereo headset driver (fig.4 "IN_R", "A2") of an audio playback device and a ground (fig.4 "E"), wherein the load is configured to prevent the audio output from directly contacting a ground when a mono headset plug is inserted into the stereo headset driver of the audio playback device (col.6 ln.14-34).

With respect to claim 3, Kurosawa discloses an audio playback device comprising: a stereo headset driver (fig.4 "A1-A2") for amplifying a first (fig.4 "IN_L") and a second (fig.4 "IN_R") audio signal to a headset; a headset jack (fig.4 "J") for contacting a headset plug (fig.2A,B) in communication with a headset, said headset jack in communication with output from said stereo headset driver; and a load (fig.4 "R8")

between said headset jack and a first audio output from said stereo headset driver for preventing a first audio output from contacting a ground (fig.4 "E") when a mono headset plug is inserted into the stereo headset driver of the audio playback device (col.6 ln.14-34).

With respect to claim 4, Kurosawa discloses the audio playback device of claim 3 wherein said load comprises a resistance (fig.4 "R8") in series between a first audio output from said stereo headset driver and the ground.

With respect to claim 5, Kurosawa discloses the audio playback device of claim 3 further comprising a second load (fig.4 "R2") between said headset jack and a second audio output (fig.4 "IN_R") from said stereo headset driver.

With respect to claim 7, Kurosawa discloses the audio playback device of claim 5 wherein said second load comprises a resistance (fig.4 "R2") in series between a second audio output (fig.4 "IN_R") from said stereo headset driver (fig.4 "A1-A2") and said headset jack (fig.4 "J").

With respect to claim 8, Kurosawa discloses a mobile communication device comprising: a stereo headset driver (fig.4 "A1-A2") for amplifying a first (fig.4 "IN_L") and a second audio signal (fig.4 "IN_R") to a headset; a headset jack (fig.4 "J") for contacting a headset plug (fig.2A,B) in communication with a headset, said headset jack in communication with output from said stereo headset driver; and a load (fig.4 "R8") between said headset jack and a first audio output from said stereo headset driver for preventing a first audio output from contacting a ground (fig.4 "E") when a mono

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headset plug is inserted into the stereo headset driver of mobile communication device (col.6 ln.14-34).

With respect to claim 9, Kurosawa discloses a method of making a stereo audio playback device compatible with stereo and mono headsets (col.1 ln.5-22) comprising: providing a headset driver (fig.4 "A1-A2") for the audio playback device for amplifying a first (fig.4 "INL") and a second (fig.4 "INR") audio signal to a headset; and placing a load (fig.4 "R8") on a first audio output from the headset driver to prevent a first audio output from contacting a ground (fig.4 "E") on a headset plug (fig.2A,B "Ce") when a mono headset plug is inserted into the headset driver of the audio playback device (col.6 ln.14-34).

With respect to claim 10, Kurosawa discloses the method of claim 9 wherein placing a load on a first audio output comprises placing a resistance (fig.4 "R8") in series between a first audio output from the stereo headset driver (fig.4 "A1-A2") and a ground (fig.4 "E").

With respect to claim 11, Kurosawa discloses the method of claim 9 further comprising placing a load (fig.4 "R2") between a second audio output (fig.4 "INR") from the headset driver and a headset jack (fig.4 "J") of the audio playback device.

With respect to claim 12, Kurosawa discloses the method of claim 11 wherein placing a load on a second audio output comprises placing a resistance (fig.4 "R2") in series between a second audio output from the stereo headset driver and a headset jack.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurosawa et al (US 4,433,209).

With respect to claim 2, Kurosawa discloses the audio playback device interface of claim 1 further comprising a second load (fig.4 "R8"), said second load in series between a second audio output of a stereo headset driver (fig.4 "INL", "A1") and a headset jack (fig.4 "J") of an audio playback device.

Kurosawa does not disclose expressly wherein the second load is equal to said first load. At the time of the invention it would have been obvious to a person of ordinary skill in the art to make the loads of the right and left channels of Kurosawa equal. The motivation for doing so would have been to draw the same amount of current from the audio drivers A1 and A2, thus resulting in a balanced signal in each earphone for sound reproduction.

With respect to claim 6, Kurosawa discloses the audio playback device of claim 5 however does not disclose expressly wherein the resistance of said second load is equal to the resistance of said first load. At the time of the invention it would have been obvious to a person of ordinary skill in the art to make the loads of the right and left

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channels of Kurosawa equal. The motivation for doing so would have been to draw the same amount of current from the audio drivers A1 and A2, thus resulting in a balanced signal in each earphone for sound reproduction.

With respect to claim 13, Kurosawa discloses the method of claim 11 however does not disclose expressly wherein the resistance of said second load is equal to the resistance of said first load. At the time of the invention it would have been obvious to a person of ordinary skill in the art to make the loads of the right and left channels of Kurosawa equal. The motivation for doing so would have been to draw the same amount of current from the audio drivers A1 and A2, thus resulting in a balanced signal in each earphone for sound reproduction.

With respect to claims 14 and 15, Kurosawa discloses the device and method of claims 4 and 10 respectively, however does not disclose expressly wherein the said resistance is equal to or greater than a minimum impedance or resistance which said headset driver is configured to drive. Official Notice is taken that headphones are well known to have a relatively low impedance. Low impedance headsets may vary from as low as 6 ohms up to about 150 ohms. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use low impedance headphones because headphones in this impedance range may be directly plugged into a headphone jack routinely found on recording and playback equipment. Low impedance headphones are commonly used in portable media devices. It is also well known that voltage dividers such as the one formed by R7 and R2 of Kurosawa in low voltage circuits use resistors with impedances in the kilo-ohm range. A combination of a low

impedance headphone and the circuit of Kurosawa would ultimately result in the resistances R2 or R8 being greater than the minimum impedance or resistance that the drivers are configured to drive.

Response to Arguments

Applicant's arguments filed October 1, 2007 have been fully considered but they are not persuasive.

With respect to the newly amended claim the Applicant argues that Kurosawa does not describe or suggest wherein the load is configured to prevent the audio output from directly contacting a ground when a mono headset plug is inserted into the stereo headset driver of the audio playback device. The Examiner disagrees with this assertion. Kurosawa clearly discloses in column 6 lines 14-34, that the potential at point "P" is reduced in the event that a monaural plug is inserted into jack J', which in turn makes Q1 non-conductive. This results in the signal "IN_R" being fed to the input of driver A1 as presented by the Applicant on page 7 of the Remarks. The Examiner would like to note that in the event a monaural plug is inserted in to the jack, the movable contact S_R is grounded (col.6 ln.14-18). In this case, resistor R2 prevents the signal from the output of driver A2 from **directly contacting a ground** (S_R), as disclosed in the present claims. The Examiner has also cited resistor R8 as preventing the audio output signal from directly contacting ground. Even though the Applicant has not contested this limitation, the Examiner would like to note that resistor R8 clearly lies

directly in the signal path between the output of driver A1 and the ground terminal "E" of the headphone jack J'.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Kurr whose telephone number is (571) 272-0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 273-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JK

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